

AMENDMENTS TO THE CLAIMS

Claims 1-2 (Cancelled).

3. (Currently Amended) ~~The semiconductor resistor of claim 1~~
wherein A semiconductor resistor formed in a semiconductor material of a first
conductivity type, the resistor comprising:
an active region of the semiconductor material;
an isolation region formed in the semiconductor material to surround the
active region, and isolate the active region from laterally adjacent regions;
a layer of insulation formed on the active region;
a semiconductor structure formed on the isolation region and the layer of
insulation so that the semiconductor structure partially overlies the active region;
and
a doped region of a second conductivity type formed in the active region, the
doped region lying adjacent to a side wall of the semiconductor structure, the doped
region has having a length and a width, the length being substantially longer than
the width.

4. (Currently Amended) ~~The semiconductor resistor of claim 1 and~~
~~further comprising~~ A semiconductor resistor formed in a semiconductor material of a
first conductivity type, the resistor comprising:
an active region of the semiconductor material;
an isolation region formed in the semiconductor material to surround the
active region, and isolate the active region from laterally adjacent regions;
a layer of insulation formed on the active region;
a semiconductor structure formed on the isolation region and the layer of
insulation so that the semiconductor structure partially overlies the active region;
and

a doped region of a second conductivity type formed in the active region, the doped region lying adjacent to a side wall of the semiconductor structure; and

a pair of spaced-apart contact structures that make an electrical connection to the doped region, a current flowing into a first contact structure of the pair, from the first contact structure through the doped region, and from the doped region out of a second contact structure of the pair.

5. (Original) The semiconductor resistor of claim 4 wherein the first contact structure includes a layer of salicide and a contact that is connected to the layer of salicide.

6. (Currently Amended) The semiconductor resistor of claim 1 ~~3~~ and further comprising a semiconductor region formed on the isolation region and the layer of insulation so that the semiconductor region partially overlies the active region, the semiconductor region being spaced apart from the semiconductor structure, the doped region lying adjacent to a side wall of the semiconductor region.

7. (Original) The semiconductor resistor of claim 6 wherein the semiconductor structure and the semiconductor region are polysilicon.

8. (Original) The semiconductor resistor of claim 6 wherein the doped region includes a first region of a first dopant concentration, a second region of a second dopant concentration, and a third region of a third dopant concentration, the first dopant concentration being substantially larger than the dopant concentrations of the second and third regions, the second and third regions lying on opposite sides of and contacting the first region.

9. (Cancelled).

10. (Original) The semiconductor resistor of claim 6 and further comprising a pair of spaced-apart contact structures that make an electrical connection to the doped region, a current flowing into a first contact structure of the pair and out of a second contact structure of the pair.

11. (Original) The semiconductor resistor of claim 10 wherein the first contact structure includes a layer of salicide and a contact that is connected to the layer of salicide.

Claims 12-13 (Cancelled).

14. (Currently Amended) The semiconductor resistor of claim ~~12~~ 4 wherein the doped region includes a first region of a first dopant concentration, a second region of a second dopant concentration, and a third region of a third dopant concentration, the first dopant concentration being substantially larger than the dopant concentrations of the second and third regions, the second and third regions lying on opposite sides of and contacting the first region.

15. (Currently Amended) The semiconductor resistor of claim ~~12~~ 14 wherein the doped region has a length and a width, the length being substantially longer than the width.

Claims 16-20 (Cancelled)

21. (New) A semiconductor resistor formed in a semiconductor material of a first conductivity type, the resistor comprising:

a doped region of a second conductivity type formed in the semiconductor material, the doped region having a width and a length that is substantially greater than the width;

a layer of insulation that contacts the semiconductor material;

a first semiconductor structure that contacts the layer of insulation;

a second semiconductor structure that contacts the layer of insulation;

an opening lying between the first and second semiconductor structures, and directly vertically over the doped region.

22. (New) The semiconductor resistor of claim 21 and further comprising a pair of spaced-apart contact structures that make an electrical connection to the doped region, a current flowing into a first contact structure of the pair, from the first contact structure through the doped region, and from the doped region out of a second contact structure of the pair.

23. (New) The semiconductor resistor of claim 22 wherein the doped region includes a first region of a first dopant concentration, a second region of a second dopant concentration, and a third region of a third dopant concentration, the first dopant concentration being substantially larger than the dopant concentrations of the second and third regions, the second and third regions lying on opposite sides of and contacting the first region.

24. (New) The semiconductor resistor of claim 22 wherein the first and second semiconductor structures contact each other.

25. (New) The semiconductor resistor of claim 22 wherein the first semiconductor structure includes polysilicon.